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A NOSEGAY FOR DONALD C. GRAHAM

WITH what words shall we celebrate the virtues of a friend who has just left the editor's chair to, in his own words, "go into the Dean business"? Thoreau who wrote an immortal essay on friendship did so with some misgivings ("The universe seems bankrupt as soon as we begin to discuss the character of individuals"), but we who were chained with Don Graham to the rowing bench of a weekly journal for five and a half long years, although we also feel some misgivings, have a pleasant duty to discharge.

If he could be recalled from the shades, Thoreau would be well equipped to anatomize our complex but delightful colleague. His dictum "To be awake is to be alive" gives an important clue to one of D. C. G.'s salient qualities. Except when he was desperately tired (and he often was) he was at all times alert, responding quickly and intelligently to ideas from any quarter. In addition to this acuity, he has the rarer and essentially ageless quality of spontaneity which gives his mind a flexibility and sureness uncommon among members of our conservative profession. When something out of the ordinary was put forward for publication, his reply invariably was "What did you have in mind?" and together we would explore the *pros* and *cons* of publication. However, a mild exterior and an open mind were joined, in his case, to a firmness of purpose that never faltered once he had made up his mind. Furthermore, when that point was reached, he took full responsibility and never by word or sign deflected any subsequent criticism on his colleagues. In short, he is honourable, responsible and courageous.

A notable feature of Don Graham's personality is his wide-ranging and lively sense of humour and a concomitant love of jest. Not for nothing is Rabelais one of his favourite authors. Many of his friends will remember with delight the brief tours he gives of the exotic gardens of the Rabelaisian imagination. His own jokes are gentle, delivered in low key and, in the best sense of the word, sly. Once, in accepting a paper on ancient coins and medicine, he complimented the author in a brief postscript: "P.S. You certainly phrase a mean coin." In another direction who, having heard him, will forget how in his leisurely, amiable way he tells one of his favourite stories, like that concerning the two merchants who went out to buy "the *blek-est* of *blek* suits"; or the one which ends with the line "I tell you, I'm just a fraud. That mouse is a ventriloquist."

A lively enjoyment of the humorous in its infinite variety is surely a mark of a receptive, well-stocked, "alive" mind. J. W. Mellor, in reproving those who confuse the fun-loving view of life with the inconsequential, said "In spite of St. Paul's little boast: 'When I became a man, I put away childish things,' I hope to be light-hearted enough, and young enough, to relish and appreciate those very things which please the juveniles. I am sorry for those who sniff them puerile."

Farewell, good friend. We who worked most closely with you in your years as editor are delighted to say that these years were an intellectual adventure, and even if the gut-grinding stress of publishing a weekly journal can never be "fun", you often made it seem so.

ANALGESIA AND ANESTHESIA IN OBSTETRICS

ON January 19, 1847, James Young Simpson of Edinburgh administered ether to a woman in labour who required a version and breech extraction. Thus, for the first time, the association of pain and suffering with parturition was interrupted and it appeared that the horrors of difficult childbirth might become a matter of history. Simpson believed that beyond humanitarian reasons the relief of pain in these potentially traumatic conditions could be life-saving. He said, "I believe that as a counteraction to the morbific influence of pain, the state of artificial anaesthesia does not only imply a saving of human suffering, but also a saving of human life . . . and I firmly believe that the superinduction of anaesthesia in obstetric practice will yet be found to diminish and remove also, in some degree, the perils, as well as the pains of labour." Simpson continued to use ether routinely to relieve the pains of childbirth in his obstetrical practice, changing to chloroform in November 1848. The use of anesthetics in obstetrics stirred up considerable controversy in the medical and lay press. The lines were not drawn over the merits or demerits of chloroform, but rather as a result of Simpson's enthusiasm and his argument with the theologians over the interpretation of the words, "in sorrow shalt thou bring forth children",

appearing in the Book of Genesis (iii, 16). In the end, Simpson and chloroform won the battle, receiving not inconsiderable help from the highest authority of the land, Her Majesty Queen Victoria, who requested chloroform during the birth of Prince Leopold in 1853, and again for the birth of Princess Beatrice in 1857. Simpson was supported on this continent by Walter Channing who introduced ether in obstetrics at the Boston Lying-In Hospital, and by A. F. Holmes who introduced chloroform in obstetric practice at the Montreal General Hospital.

Beginning at the turn of the century, with the introduction of "twilight sleep" (morphine and hyoscine) for obstetrical sedation by Gauss of Freiburg, the medical press has published intermittent but enthusiastic reports on the merits of various analgesics and their lack of effects on the fetus, and there arose a continuing controversy between enthusiasts for general anesthesia and those extolling the merits of conduction anesthesia. Every conceivable analgesic, barbiturate, tranquillizer, local and inhalation anesthetic has been used in obstetrics and described in the literature. The report by Van Praagh and Povey on the use of "Paracervical Block Anesthesia in Labour" which appears elsewhere in this issue (page 262) presents a further variation of the use of local anesthesia to replace narcotics as an analgesic agent in the first stage of labour, followed by ether anesthesia or pudendal block for delivery. The many different methods and agents recommended for obstetrical analgesia and anesthesia attest to the fact that none is ideal.

The problems that face us today are in no way different from those which faced Simpson over 100 years ago. The pertinent question is still raised: Do we by the administration of obstetric analgesia and anesthesia save or jeopardize mothers' and infants' lives? Investigations have as yet failed to yield conclusive answers, because of the paucity of information on fetal physiology, the lack of understanding of pain and our inability to measure it, the countless variabilities in this complex phenomenon of child birth, observer bias, and finally, the marked variations in obstetrical and anesthetic practice.

During the past 25 years there has been a marked reduction of maternal and fetal mortality in this country, although the trend appears to be levelling off recently. There is no doubt that this decline is due to vastly improved prenatal and obstetric care, the availability of blood, the advent of antibiotics and the better understanding of toxemia, with respect to both prevention and treatment. However, the effects, side effects and complications of analgesia and anesthesia, although they are not yet major factors, have increased in importance as lethal hemorrhage, toxemia and infection have been reduced.

As early as 1874 Zweifel proved by clinical analysis that chloroform passed promptly from the maternal circulation to the blood in the umbilical cord. Since that time, maternal and fetal blood estimations of every analgesic, hypnotic, inhalation and parenteral anesthetic agent (including local anesthetics) have been made. Without exception, all pass through the placenta by rapid diffusion. This rate of diffusion is governed by the molecular size, lipid solubility, electrical charge and concentration gradient of the agent concerned. In most instances these drugs appear almost immediately in the fetal blood stream, and may reach a concentration close to that in the maternal blood in a matter of minutes. The fundamental causes of maternal mortality and morbidity due to anesthetic factors are derangements of the circulatory and respiratory systems, causing hypotension or hypoxia, respectively. These factors, which can be associated with general, conduction or local anesthesia, may have only transitory effects on the mother but may lead to profound changes in the fetus, particularly if associated with oversedation and depression with prolonged or deep anesthesia. Thus maternal depression, hypoxia or hypotension may be reflected in the newborn child by cyanosis or pallor, shallow jerky respirations or apnea, a slow or irregular heart beat and absence of muscle tone: the clinical signs which led to the Apgar system of scoring the condition of newborns, one minute after the umbilical cord is clamped. The incidence of Apgar scores of 6 or less (considered to indicate a depressed baby) reported in the communication by Van Praagh and Povey elsewhere in this issue is 17%, a figure which might be considered to be unduly high by authorities in this country, be they supporters of general or conduction anesthesia. This figure, however, cannot be attributed to the use of paracervical block analgesia in this study, as other sedatives were used, and the majority of deliveries were carried out under nitrous oxide-oxygen-ether anesthesia.

It may be contended that the avoidance of all drugs, including anesthetics, gives the best results in obstetrics, but then we return to the pre-Simpson days. Obviously, then, there is a place for analgesia and anesthesia of one form or another, but each drug and technique must be selected to meet the needs of the individual patient, or omitted if not required. Few would disagree with the view that over-enthusiastic use of one drug or technique at the expense of another, as well as "over-medication" and "over-anesthetization", is to be avoided. Finally, the safety of any anesthetic is dependent in no small part on the ability of the person who administers it, who must appreciate the changes in maternal physiology and the hazards that are forever associated with labour and childbirth.

"Medical men may oppose for a time the superinduction of anesthesia in parturition, but they will oppose it in vain; for certainly our patients themselves will force the use of it upon the profession. The whole question is, even now, one merely of time." So said Simpson in 1847.